

New records of blind snakes resembling the robust blind snake *Anilius ligatus* (Peters 1879), on Cape York Peninsula.

Memoirs of the Queensland Museum - Nature 59: 8. 2014. Blind snakes are extremely secretive with numerous Australian species known from few specimens or localities (Vanderduys 2013). Two recent records of blind snakes morphologically resembling *Anilius ligatus* (until recently *Ramphotyphlops ligatus*; Hedges *et al.* 2014) occur much further north than previously recognised, 330 km and 525 km north, respectively, of the nearest records (Atlas of Living Australia 2013; fig. 1). The first (QMJ92808) 184 mm SVL, 8 mm tail length, (including spinose tip) was collected on the 8th of June 2010 at 13°39.09'S; 142°47.78'E in a funnel trap, during a survey of Oyala Thumotang (Mungkan Kandju) National Park. The trap site was located within tall open *Eucalyptus tetrodonta* woodland, with a *Melaleuca viridiflora* subcanopy on grey sandy soil. *Corymbia confertiflora*, *C. stockeri* and *Erythrophleum chlorostachys* were also common in the tree layer. There was a thick ground cover dominated by *Heteropogon triticens* and *Sarga plumosum*. The area is mapped as being 50% Regional Ecosystem (RE) 3.5.7 x 2a: "*Eucalyptus tetrodonta* woodland on sand plains", mixed with other REs (Queensland Herbarium 2013) and our data conform to this description. The second specimen (QMJ93151) was collected in a pitfall bucket on the 27th of May 2013 at 12°03.22'S; 142°03.27'E during fauna surveys approximately 70 km north of Weipa, on the western side of Cape York Peninsula. The trap site was located within tall open forest dominated by *Eucalyptus tetrodonta* on hard soils consisting of dry orange loam with bauxite. *Erythrophleum chlorostachys* and *Corymbia nesophila* were also present in the tree layer, while the ground layer was dominated by *Eulalia mackinlayi*, *Heteropogon triticens*, *Sarga*

plumosum and *Schellhammeria multiflora*. The area is mapped as Regional Ecosystem 3.5.2: "*Eucalyptus tetrodonta* and *Corymbia nesophila* tall woodland on deeply weathered plateaus and remnants" (Queensland Herbarium 2013) and the site conforms well to this description. Based on available identification keys in Cogger (2000) and Wilson (2005) both specimens are clearly morphologically *A. ligatus* as currently understood. Examination of the specimens by Dr Andrew Amey (Queensland Museum) confirmed this. However, recent genetic work on specimens from nearly 2000 km (south) and over 700 km (west; straight line, across the Gulf of Carpentaria) from our Cape York Peninsula specimens (fig. 1) has shown that *A. ligatus* is both paraphyletic and polyphyletic indicating the presence of cryptic species (Marin *et al.* 2013). The genetic affiliation of the Cape York Peninsula specimens requires further investigation. The nominal *A. ligatus* taxa presented in Marin *et al.* (2013), the disjunct distributions of many reptilian taxa, and similar distribution of non-reptilian taxa across the Carpentaria Barrier (e.g. Kikkawa 1969; Blacket *et al.* 2001), suggests that many species currently recognised as occurring across the monsoonal tropics may be rich in cryptic taxa, providing a fertile ground for further taxonomic studies.

Literature cited

- Australian Living Atlas. 2013. Atlas of Living Australia. Search under "*Ramphotyphlops ligatus*", "*Typhlops ligatus*" and all species listed. Data downloaded July 2013. <http://www.ala.org.au/>
- Blacket, M.J., Adams, M., Cooper, S.B.J., Krajewski, C. & Westerman, M. 2001. Systematics and Evolution of the Dasyurid Marsupial Genus *Sminthopsis*: I. The Macroura Species Group. *Journal of Mammalian Evolution*, 8(2): 149-170. <http://dx.doi.org/10.1023/A:1011322031747>
- Cogger, H.G. 2000. *Reptiles and Amphibians of Australia*. (Reed New Holland: Sydney).
- Hedges, S.B., Marion, A.B., Lipp, K.M., Marin, J., & Vidal, N. 2014. A taxonomic framework for typhlopoid snakes from the Caribbean and other regions (Reptilia, Squamata). *Caribbean Herpetology* 49: 1-61.
- Kikkawa, J. & Pearse, K. 1969. Geographical distribution of land birds in Australia - A numerical analysis. *Australian Journal of Zoology* 17: 821-840. <http://dx.doi.org/10.1071/ZO9690821>
- Marin, J., Donnellan, S.C., Hedges, S.B., Doughty, P., Hutchinson, M.N., Craud, C. & Vidal, N. 2013. Tracing the history and biogeography of the Australian blindsnake radiation. *Journal of Biogeography* 40: 928-937. <http://dx.doi.org/10.1111/jbi.12045>
- Queensland Herbarium. 2013. Regional Ecosystem Description Database (REDD). Version 6.1 (February 2013) (Queensland Department of Science, Information Technology, Innovation and the Arts: Brisbane).
- Vanderduys, E.P. 2013. Additional information on *Ramphotyphlops aspinus* Couper, Covacevich & Wilson 1998, A poorly known blind snake from the Mitchell Grass Downs of Queensland. *Memoirs of the Queensland Museum - Nature* 56: 71-76.
- Wilson, S. 2005. *A Field Guide to Reptiles of Queensland*. (Reed New Holland: Sydney).

Angus McNab and Mark Sanders, EcoSmart Ecology, 48 Streeton Parade, Everton Park, Queensland, Australia, 4053. Eric Vanderduys, CSIRO Ecosystem Sciences, ATSIP PMB PO, Aitkenvale, Queensland, Australia 4814.

First published online: 7 November 2014 – <http://dx.doi.org/10.17082/j.2204-1478.59.2014.2014-1>
LSID: urn:lsid:zoobank.org:pub:0DA30508-42FB-4C3C-B68F-C77123CFACC2

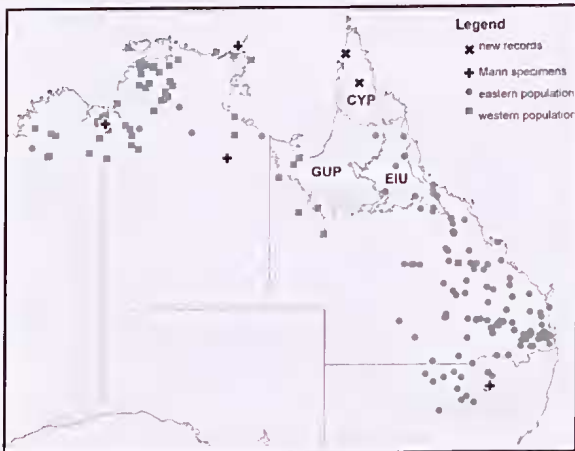


FIG. 1. Known records of *Anilius ligatus* in proximity to individuals collected on Cape York, Queensland (new records x). Four genetically tested specimens are marked (+). Relevant Bioregional boundaries are shown: CYP = Cape York Peninsula, EIU = Einasleigh Uplands, GUP = Gulf Plains. Data collected from Atlas of Living Australia, Atlas of NSW Wildlife and Marin *et al.* (2013).